

CLAIMS

1. An information processing apparatus comprising:

generating means for generating ClipMark formed by a mark specifying a characteristic picture extracted from an input AV stream, as management information for supervising the AV stream, and for generating PlayListMark, formed by marks pointing to a picture optionally specified by a user, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream; and

recording means for recording said ClipMark and PlayListMark as respective independent tables on a recording medium.

2. The information processing apparatus according to claim 1 wherein said generating means generates said ClipMark and said PlayListMark as a ClipInformation file and as a PlayList file, respectively.

3. The information processing apparatus according to claim 1 characterized in that said PlayListMark further includes a mark specifying a Resume point in reproducing said PlayList.

4. The information processing apparatus according to claim 1 wherein, in reproducing said PlayList, said mark forming the ClipMark of said AV stream corresponding to the reproduction domain of said PlayList is referenced.

5. The information processing apparatus according to claim 1 wherein said mark of the PlayListMark includes presentation time stamp and the identification information

for indicating one reproduction domain specified on said AV stream data forming the reproduction route of said PlayList.

6. The information processing apparatus according to claim 1 wherein said mark forming the ClipMark or said mark forming said PlayListMark includes the information specifying an entry point of an elementary stream.

7. The information processing apparatus according to claim 1 wherein said mark of the PlayListMark includes the information of the type at least including the Resume point of the start point of a favorite scene or a Resume point of the PlayList specified by a user.

8. The information processing apparatus according to claim 1 wherein said mark of the ClipMark and said mark of the PlayListMark are represented by an address of a relative source packet corresponding to an entry point of said AV stream.

9. The information processing apparatus according to claim 8 wherein said mark of the ClipMark and said mark of the PlayListMark are represented by a first address of a relative source packet corresponding to an entry point of said AV stream and by a second address of an offset from said first address, respectively.

10. The information processing apparatus according to claim 1 further comprising:

type detection means for detecting the type of said characteristic picture detected at the time of recording by said first recording means;

said first recording means recording said mark forming said ClipMark and said type as detected by said detection means.

11. The information processing apparatus according to claim 1 wherein said mark of said ClipMark includes a scene change point, a commercial start point, commercial end point or a title displaying scene.

12. An information processing method comprising:

a step of generating ClipMark formed by a mark specifying a characteristic picture extracted from an input AV stream, as management information for supervising the AV stream, and of generating PlayListMark, formed by marks pointing to a picture optionally specified by a user, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream; and

a step of recording said ClipMark and PlayListMark as respective independent tables on a recording medium.

13. A recording medium having recorded thereon a computer-readable program, said computer-readable program including

a step of generating ClipMark formed by a mark specifying a characteristic picture extracted from an input AV stream, as management information for supervising the AV stream, and of generating PlayListMark, formed by marks pointing to a picture optionally specified by a user, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream; and

a step of recording said ClipMark and PlayListMark as respective independent tables on a recording medium.

14. A program for having a computer execute

a step of generating ClipMark formed by a mark specifying a characteristic picture extracted from an input AV stream, as management information for supervising the AV stream, and of generating PlayListMark, formed by marks pointing to a picture optionally specified by a user, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream; and

a step of recording said ClipMark and PlayListMark as respective independent tables on a recording medium.

15. An information processing apparatus comprising:

readout means for reading the management information for supervising said AV stream including ClipMark formed by marks pointing to a characteristic picture extracted from an AV stream, and also for reading, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream, PlayListMark formed by a mark pointing to a picture optionally specified by a user;

presentation means for presenting said management information read out by said readout means and the information by said PlayListMark;

referencing means for referencing, from said information presented by said presentation means, said ClipMark corresponding to the PlayList commanded to be reproduced by the user; and

reproducing means for reproducing said AV stream including said ClipMark, referenced by said referencing means, from a position corresponding to said ClipMark.

16. The information processing apparatus according to claim 15 wherein said presentation means presents a list by said thumbnail picture associated with said PlayListMark.

17. The information processing apparatus according to claim 15 wherein said mark corresponding to said ClipMark and said mark corresponding to said PlayListMark are represented by an address of a relative source packet corresponding to an entry point of said AV stream.

18. The information processing apparatus according to claim 17 wherein said mark of the ClipMark and said mark of the PlayListMark are represented by a first address of a relative source packet corresponding to an entry point of said AV stream and by a second address of an offset from said first address, respectively.

19. The information processing apparatus according to claim 15 wherein said mark of said ClipMark includes a scene change point, a commercial start point, a commercial end point or a title displaying scene.

20. An information processing method comprising:

a readout step of reading the management information for supervising said AV stream including ClipMark formed by marks pointing to a characteristic picture extracted from an AV stream, and also for reading, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream, PlayListMark formed by a mark pointing to a picture optionally specified by a user;

a presentation step of presenting said management information read out by said readout step and the information by said PlayListMark;

a referencing step of referencing, from said information presented by said presentation step, said ClipMark corresponding to the PlayList commanded to be reproduced by the user; and

a reproducing step of reproducing said AV stream including said ClipMark, referenced by said referencing step, from a position corresponding to said ClipMark.

21. A recording medium having recorded thereon a computer-readable program, said computer-readable program including

a readout step of reading the management information for supervising said AV stream including ClipMark formed by marks pointing to a characteristic picture extracted from an AV stream, and also for reading, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream, PlayListMark formed by a mark pointing to a picture optionally specified by a user;

a presentation step of presenting said management information read out by said readout step and the information by said PlayListMark;

a referencing step of referencing, from said information presented by said presentation step, said ClipMark corresponding to the PlayList commanded to be reproduced by the user; and

a step of recording said ClipMark and PlayListMark as respective independent

tables on a recording medium.

22. A program for having a computer execute

a readout step of reading the management information for supervising said AV stream including ClipMark formed by marks pointing to a characteristic picture extracted from an AV stream, and also for reading, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream, PlayListMark formed by a mark pointing to a picture optionally specified by a user;

a presentation step of presenting said management information read out by said readout step and the information by said PlayListMark;

a referencing step of referencing, from said information presented by said presentation step, said ClipMark corresponding to the PlayList commanded to be reproduced by the user; and

a step of recording said ClipMark and PlayListMark as respective independent tables on a recording medium.

23. A program having recorded thereon, as independent tables, the management information for supervising said AV stream including ClipMark formed by marks pointing to a characteristic picture extracted from an AV stream, and also for reading, from a reproduction domain corresponding to the PlayList defining the combination of preset domains in said AV stream, PlayListMark formed by a mark pointing to a picture optionally specified by a user.